Patron
Passive Elektronic

PPV-W5 24V & 48V Series

DESCRIPTION: **0.5W 3KVDC Isolated Single & Dual Output DC/DC Converters**

The PPV-W5 series are miniature, isolated 0.5W DC/DC converters in a SIP and DIP package. They offer the ideal solution in many space critical applications for board level power distribution. The Internal SMD construction makes it possible to offer a product with high performance at low cost. The series offers smaller size, improved efficiency and 3KVDC isolation.

FEATURES

RoHS compliant、CE certification	Efficiency to 80%	Power density up to 0.85W/cm^3
Single or dual output	UL 94V-0 package material	Power sharing on dual output
Footprint from 1.17cm^2	Industry standard pinout	3KVDC isolation (1 minute)
Input voltage: 24V, 48V	Output voltage: 3.3V,5V, 9V, 12V, 15V / ±5V, ±9V, ±12V, ±15V	Operating temperature: -40ºC to 105ºC

SELECTION GUIDE

Part Number	Nominal Input Voltage	Output Voltage	Output Current(Max./Min)	Efficiency	Package Style
	V	V	mA	%	
PPV2405DA-W5	24	5	100/10	71	DIP
PPV2409DA-W5	24	9	55.5/5.55	79	DIP
PPV2412DA-W5	24	12	41.7/4.17	80	DIP
PPV2415DA-W5	24	15	33.3/3.33	81	DIP
PPV2403SA-W5	24	3.3	152/15.2	70	SIP
PPV2405SA-W5	24	5	100/10	71	SIP
PPV2409SA-W5	24	9	55.5/5.55	79	SIP
PPV2412SA-W5	24	12	41.7/4.17	80	SIP
PPV2415SA-W5	24	15	33.3/3.33	81	SIP
PPV2424SA-W5	24	24	20.84/2.084	77	SIP
PPV4805DA-W5	48	5	100/10	71	DIP
PPV4809DA-W5	48	9	55.5/5.55	79	DIP
PPV4812DA-W5	48	12	41.7/4.17	80	DIP
PPV4815DA-W5	48	15	33.3/3.33	81	DIP
PPV4803SA-W5	48	3.3	152/15.2	71	SIP
PPV4805SA-W5	48	5	100/10	71	SIP
PPV4809SA-W5	48	9	55.5/5.55	79	SIP
PPV4812SA-W5	48	12	41.7/4.17	80	SIP
PPV4815SA-W5	48	15	33.3/3.33	81	SIP
PPV2405D-W5	24	±5	±50/±5	71	DIP
PPV2409D-W5	24	±9	±27.75/±2.775	79	DIP
PPV2412D-W5	24	±12	±20.85/±2.085	80	DIP
PPV2415D-W5	24	±15	±16.65/±1.665	81	DIP
PPV2405S-W5	24	±5	±50/±5	71	SIP
PPV2409S-W5	24	±9	±27.75/±2.775	79	SIP
PPV2412S-W5	24	±12	±20.85/±2.085	80	SIP
PPV2415S-W5	24	±15	±16.65/±1.665	81	SIP
PPV4805D-W5	48	±5	±50/±5	71	DIP
PPV4809D-W5	48	±9	±27.75/±2.775	79	DIP
PPV4812D-W5	48	±12	±20.85/±2.085	80	DIP
PPV4815D-W5	48	±15	±16.65/±1.665	81	DIP
PPV4805S-W5	48	±5	±50/±5	71	SIP
PPV4809S-W5	48	±9	±27.75/±2.775	79	SIP
PPV4812S-W5	48	±12	±20.85/±2.085	80	SIP
PPV4815S-W5	48	±15	±16.65/±1.665	81	SIP

Add suffix “P” for continuous short circuit protection, for example PPV2405SAP-W5.

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Voltage range	24V input variants	22	24	26.5	V
Voltage range	48V input variants	43	48	53	V

ABSOLUTE MAXIMUM RATINGS

Short-circuit protection	1 second
Lead temperature 1.5mm from case for 10 seconds	300°C
Input voltage Vin, PPV24 variants	28V
Input voltage Vin, PPV48 variants	54V

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Rated Power	TA=-40℃ to 85℃			0.5	W
Voltage Set Point Accuracy	See tolerance envelope				
Line regulation	High VIN to low VIN (voltage variation +/-5%)		1.0	1.2	%/%

ISOLATION CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation test voltage	Tested for 1 minute	3000			VDC
Resistance	Viso= 1000VDC	1			GΩ

GENERAL CHARACTERISTICS

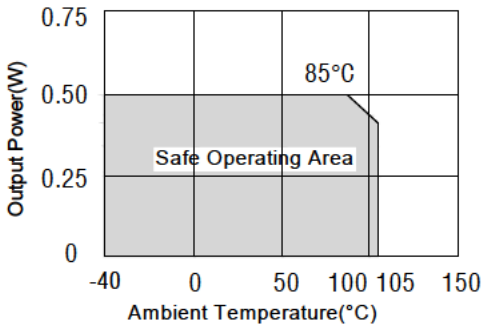
Parameter	Conditions	Min.	Typ.	Max.	Units
Switching frequency	All input variants		110		kHz

TEMPERATURE CHARACTERISTICS

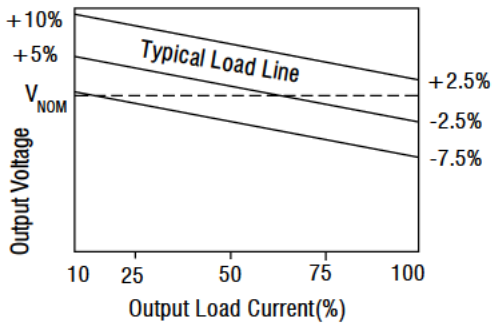
Parameter	Conditions	Min.	Typ.	Max.	Units
Specification	Derating if the temperature ≥85°C	-40		105	℃
Storage		-55		130	℃
Cooling	Free air convection				

All specifications typical at TA=25℃, nominal input voltage and rated output current unless otherwise specified.

TEMPERATURE DERATING GRAPHS



TOLERANCE ENVELOPES



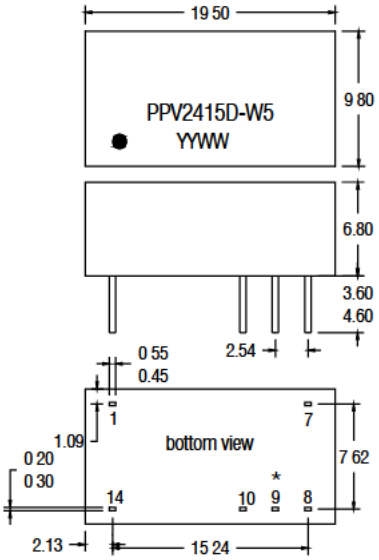
SOLDERING INFORMATION

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300℃ for 10 seconds. Both SIP and DIP types in this series are backward compatible with Sn/Pb soldering systems.

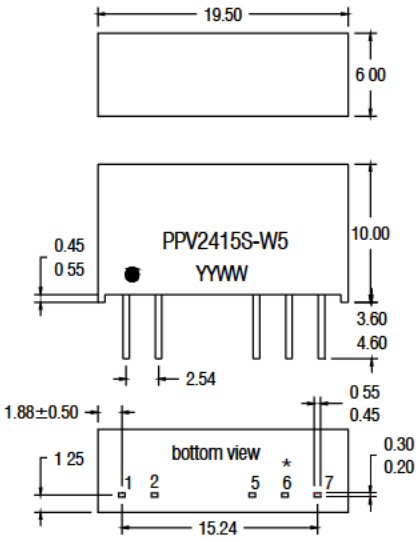
PPV-W5 24V & 48V Series

MECHANICAL DIMENSIONS

DIP Package



SIP Package



Pin not fitted on single output variants.All dimensions in mm ±0.25mm.
*7.70for 48V variants **7.50 for 48V variants
All pins on a 2.54mm pitch and within ±0.25mm of true position.
Weight:2.11g(DIP and SIP)

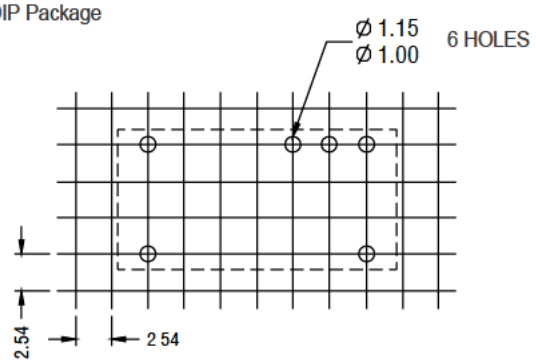
PIN CONNECTIONS

Dual output variants	
14 PIN DIP	
Pin	Function
1	-Vin
7	NC
8	+Vout
9	0V
10	-Vout
14	+Vin
7 PIN SIP	
Pin	Function
1	+Vin
2	-Vin
5	-Vout
6	0V
7	+Vout

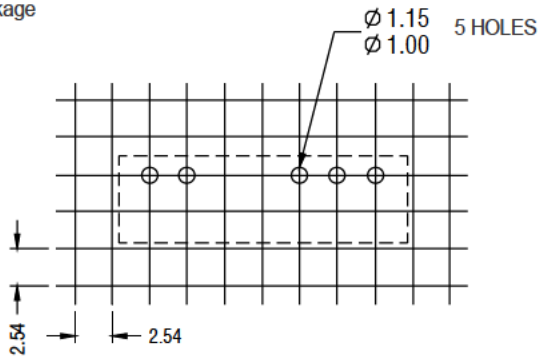
Single output variants	
14 PIN DIP	
Pin	Function
1	-Vin
7	NC
8	+Vout
10	-Vout
14	+Vin
7 PIN SIP	
Pin	Function
1	+Vin
2	-Vin
5	-Vout
7	+Vout

RECOMMENDED FOOTPRINT DETAILS

14Pin DIP Package

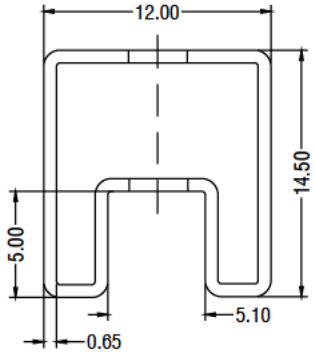


7Pin SIP Package

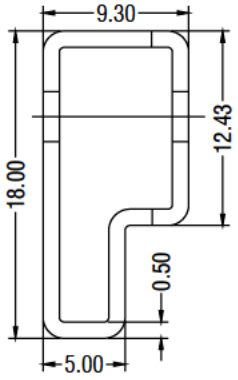


TUBE OUTLINE DIMENSIONS

14Pin DIP Tube



7Pin SIP Tube



Unless otherwise stated all dimensions in mm ±0.5mm.

Tube length (14 Pin DIP) : 520mm ±2mm.

Tube length (7 Pin DIP) : 520mm ±2mm.

Tube Quantity : 25PCS